

# Tourism Reclaiming Urban

## Case study: City of Macau in the Pearl River Delta Region, China

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### Abstract

*The main subject of this paper is to study the use of land reclamation development in the contexts of tourism spaces construction in its relation to consolidate urban and growing regions. Referring to the processes involved, it is relevant to analyze the interaction of massive tourism developments using urbanization based on rapid construction enhanced by land reclaimed to water. The “urbanization of water” for tourism purposes creates diverse asymmetries, raising problematic issues namely in the urban context. Among others one can find conflicts - in the limits and borders, contaminating and spreading phenomenon that formulates new in the existing, causing controversial dichotomies leading to the construction of history in detriment of consolidating past testimonials - that includes heritage and cultural aspects now replaced, reinvented and recreated in thematized urban contexts.*

Keywords: tourism spaces, land reclamation, Macau city, Pearl River Delta region.

### Introduction

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This paper pretend to do a comparative study of urban situations using massive land reclamation not only as a process of gaining more land “for needs” but also above all as a way of constructing and “making” city.

## Land Reclamation in People’s Republic of China

People’s Republic of China (PRC) is very active in reclaiming land from water mainly from its coastlines. In the last five decades of the twentieth century, PRC reclaimed about 12.000 sq Km, that is, almost five times of the size of Luxembourg or seventeen times of that of Singapore, fifteen times of Barcelona, four times of Dubai. PRC is leading, and will continue for the next decade, the process of land reclamation to water.

It seems paradoxical that beeing PRC, by its land area, the biggest country in the world after Russia, is doing such a huge land reclamation to water. This paper will try to point out why this is happening.

Several cities in PRC are using land reclamation to expand territory in order to increase building areas to fullfil the strong demand of land to sustain the rapid increase of cities and of population concentrated on those cities. Cities being an economic grow indicator, PRC is strongly investing to increase huge macro economic areas joining the values of geographically close cities to promote fast development.

Two main huge economic areas are identified in China: the Yangtze River Delta (YRD) and the Pearl River Delta (PRD). Both of them, traditionally big port areas with important coastal activities, are in the last three decades increasing rapidly in population, generating the two largest concentration of metropolises in the world with fifty to eighty million (YRD) and sixty four to a hundred and twenty million (PRD) of inhabitants.



**Figure 01.** Yangtze River Delta  
<http://www.cityu.edu.hk>



**Figure 02.** Pearl River Delta.  
[http://en.wikipedia.org/wiki/Pearl\\_River\\_Delta](http://en.wikipedia.org/wiki/Pearl_River_Delta)

Cities in the Pearl River Delta (PRD), South China, are playing this economic boom role, including the two Special Administrative Regions (SAR’s) – Macau and Hong Kong; two Special Economic Zones

(SEZ's) – Zhuhai and Shenzhen; a Provincial Capital - Guanzhou and seven other densely populated cities, all part of the Great PRD (GPRD), economically the most prosperous area in the globe.

It is not by casualty that the huge land reclamation is being done in these areas. It is because the land reclamation is a fast and effective way to gain flat land and definitely the most economical way to have soil and to build, as apparent construction's restraints are low (no hills and no rocks, soil is sandy and "soft"), due to increased level of technology. These process of "land production" also generates quite a big income to administrations and governments, since environmental issues are not strongly and properly evaluated.

Frequently, the land reclamation involves urban plans in a big scale in order to promote their approval as they are associated with great expansion of land with strong impacts. Rarely those plans are strictly followed since they serve as "marketing" promotions and not as a help to increase the cultural or social values of communities. Urban plans are strongly dependent on a enormous variety of political and economical issues that restraint the application of the urban plan regulations.



**Figure 03.**Provinces of PR China.

[http://en.wikipedia.org/wiki/People's\\_Republic\\_of\\_China](http://en.wikipedia.org/wiki/People's_Republic_of_China)

City	Project designation	Period	Increase of land [sqKm]
Liaoning-YRD	Caofeidan Land Reclamation	2006 - now	310,0
Jiangsu-YRD	(Yellow River)	2009 - 2020	1.817,0
Shanghai-YRD	Lingang New City Project	2003 - 2006	133,3
Zhejiang-YRD	Xuanmen, Yuhuan and Taizhou	1975 - 2010	266,4
Guangdong-PRD	Shantou (project)	2004 - now	20.000,0
Hong Kong-PRD	Praya Reclamation + harbor + others	1860 - now	c. 300,0
Macau-PRD	inner and outer harbors + cotai	1700 - now	17,0

**Figure 04.** Land reclamation in PRC.

[http://en.wikipedia.org/wiki/Land\\_reclamations\\_of\\_the\\_People's\\_Republic\\_of\\_China](http://en.wikipedia.org/wiki/Land_reclamations_of_the_People's_Republic_of_China)

## **The Pearl River Delta, Macau and land reclamation**

The three vertices of the Pearl River Delta (PRD) are the following three cities: Guangzhou, Macau and Hong Kong.

Guangzhou is the provincial capital of Guangdong, one of the twenty two provinces of PRC. Macau, the oldest city, after Guangzhou, is culturally important due to the five hundred year's coexistence of East and Western European cultures and finally Hong Kong, a strong financial and economic hub in the region.

In the 1980's, due to the political changes in PRC, two Special Economic Zones (SEZ's) were created on the north borders with Macau and Hong Kong, Zhuhai and Shenzhen respectively. Since then, six other cities have been booming in population and in economy: Dongguan; Foshan; Huizhou; Jiangmen; Zhongshan and Zhaoqing.

Demographics indices show that Macau has a estimated population of 544,600 individuals and its density is the world's highest: 18,568,0 inhab/sqKm. This is almost three times of Hong Kong's 6,480,0 inhab/sqKm, followed by Guangzhou's 1,708,0; Zhuhai 943,9; Shenzhen 8,588,0; Dongguan 3,334,8; Foshan 1,886,5; Huizhou 420,9; Jiangmen 471,1; Zhongshan 1,733,8 and Zhaoqing 175,2.

Its high density as well as an extreme lack of land for urban expansion and economic development led Macau to some attempts to find its economical survival on small exporting industries such as textiles, toys, flowers...and more recently, (from the middle of the twentieth century) to be a local cultural and entertainment hub, based on its heritage and history, combining with game and entertainment industries to promote tourism.

Tourism has been the key point to promote Macau due to its small size, rich heritage and history. Macau's architecture and urban structure are the main attraction and its scale was a factor considered in the classification as a World Heritage (by Unesco). Macau's urban development was slow and could resist against a strong real estate's influences coming from its neighbour Hong Kong.

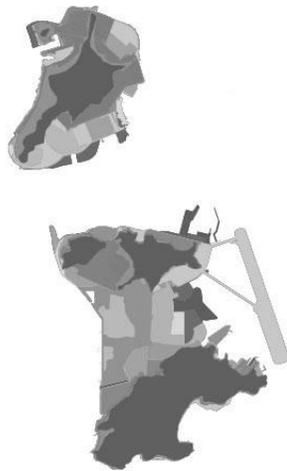
Low technological capacity associated with low economical interests from investors led Macau to a balanced and controled urban development. But it also contributed to a poor quality of materials and techniques used to build its architecture, specially for vertical/tall buildings. At that time the closest resources for construction were settled in Zhuhai and imported from there or based in small local construction companies with few resources when compared with Hong Kong. Macau harbours became obsolete and the size of Macau start to be a problem to maintain its independence as a city. The more developed, the more resources Macau needed from its neighbours. A similar situation also happened in Singapore, Monaco or resembling city-states.

In general, the inhabitants of these small cities have lived from the relations with water; fishermen or merchants, the growth of economy was a result of the relation with ports, harbors – with water. Later those places had a last chance to promote the priviledge of having waterfronts and explored them in diverse ways, by constructing housing or parks, taking advantages of the irregular shapes of the shoreline

and natural bays or beaches, or, by using the old and obsolete industrial buildings, recycling them the best they could. This happened in Europe, and Macau followed it, while in Hong Kong and in vast other places the pressure of the economic agents (and the strong need of space) led to modernize the city by demolishing and building new and taller.

## Macau land reclamation

As we have seen Macau's historical patterns are a sample not only in the context of Pearl River Delta, due to its long testimony at the confluence of Eastern and Western values, but also as an important reference of land reclamation structured urban historical city.



**Figure 06.** Macau land reclamation evolution map. 1912-2008.  
Author's map.

The natural siltation of the Pearl River Delta in its junction with the North River, creates conditions to the formation of new land. In the middle of the eighteenth century and for a century Macau was mainly controlling and protecting the margins creating piers in the harbours, promoting the main economic sustainability of the city: the fishing industry.

This industry prevailed until the middle of the twenty century in the Inner Harbour. But the city discovered another way of economic viability. This process starts when Macau discover that could be a touristic destination for people living and working in Hong Kong. Macau developed his waterfront dedicated to western foreigners/or rich chinese for the first time in the middle of the nineteenth century. The area was called "Praia Grande". There Macau build a couple of mediterranean style houses, with big balconies turned to magnificent views of the Pearl River.

With the construction of the Baía da Praia Grande (that inspired the major land reclamation project of Hong Kong in 1860's, the so called "Praya Reclamation") and a hundred years later, in late 1960's led to the four decades game contract monopoly signed in order to guarantee Macau's economic viability and survival.

The taxation over the gambliig allowed Macau to aspire to build more, and a big investement have been done in reclaiming land from water in the 1960's. Casinos, several hotels and touristic structures were

built, and another huge area of land was reclaimed in the followed decade and being built during the 1980's.

This area was later planned to be extended to a wider zone with commercial “high quality” shops and hotels promoting high quality tourism. The construction of a deepwater port on the eastern part, at Areia Preta was another intent to promote the economy of Macau.

In the 1960's Macau build some houses in Modern style, on top of Penha hill and a new and vital contract was signed with the government in order to develop gambling industry. For 40 years the taxation of gambling was the main impeller of the economy in Macau.



**Figures 07 and 08.** Macau land reclamation aerial photos. 1960 & 1999.  
Author's adapted photos

After the handover in 1999 the political situation in Macau had change, but not until the year of 2002, the city was not having big changes in terms of its architecture and urban design. The majestic changes happened after the gambling liberalization that completly reshape the water front of Macau and unified the two islands in a huge area called Cotai.

From then on Macau had built two strips, the Macau Strip and the Cotai strip, importing from Las Vegas its architectural references, shapes and neo-classic designs. All those buildings were constructed on land reclimed from water in just seven years time.

The sedimental, historic and old city of Macau, with five centuries of existance was reshaped and inclosed, losing its visual and physical connections with water among other big constraints like traffic jams, air polution and saturation.

Land reclamation was used to promote and develop all those projects that help the economy to grow. Some income and profits were also generated by selling the new land conquered to the water but this is the bright side of the coin if we don't mention other aspects such as the environmental one.



**Figure 09.** Macau land reclamation and casinos map.2008.  
Author's adapted map.

## Macau and the infrastructures for tourism

Macau is not only a historical place but also culturally rich with enormous values promoted by its cross cultures projected in the architecture and urban spaces and places, the pearl of tourism in the Delta.

The city of Macau was mainly build on the hills with narrow accesses to the harbours. Its military architecture (now converted into museums) and churches on top of the hills and the administrative and public buildings, squares, etc. built downtown, in flat land.

Macau is original in its architecture: combining Portuguese and Chinese architectural and structural elements in its civil and religious buildings (both Portuguese churches and Chinese temples). It is a unique sample in PRC and in the world. Macau is also unique in its cultural aspects: linguistic, social, anthropological, etc.



**Figure 05.** Macau panoramic view on the early years of the twenty century.  
<http://www.facebook.com/groups/26556752554/#!/groups/26556752554/photos>

Macau was an important port in the sixteenth and seventeenth century. The “commercial door” linking China and Western and Eastern Countries, lost its importance after the Opium War, led by the British that occupied Hong Kong. Macau tried to survive developing small economies while Hong Kong became the main port in the area. In the middle of the twentieth century, gambling was officially approved by Macau Government who kept some percentage of the gambling income by introducing taxes and Macau’s economy slightly increase.

Macau survived from gambling and small other industries, mainly for exportation to ex-Portuguese colonies in India, Africa, Brasil, later to Europe and the United States of America.

Macau found diverse solutions for an expansion. In the last decade of last century several urban plans were prepared, very detailed in order to build an extension on continuity or rupture with the existing city. The proposals were diverse and creative and at the same time scaled and balanced in full respect of the old city: low buildings interspersed by pedestrian and green areas, schools, administrative buildings, etc.

Local architects, like Manuel Vicente, and also an external team led by renamed architects such as Fernando Távora, Álvaro Siza Vieira and Eduardo Souto Moura (the last two won the Pritzker Prize of 1992 and 2011 respectively) were called as a result of a competition and made their proposals. They were approved after several years but the plans were never respected due to the real estate’s pressure to increase densities and volumes and became obsolete after the replacement of housing projects by casino’s and hotel’s.

Those projects were based on reclaimed land shaped according to the designed plans, volumetries and architectural forms proposed as an attempt to control densities, city design and balanced development but they ended failing their goals and they were replaced by gambling and tourist industries.

## **Final remarks**

The land reclamation emerges as a comprehensive solution to the planned urban development at present and for the future. Today territorial expansion is driven by the acceleration and the competition of economies which can be found in the scientific novelty of its designed buildings – infra and supra structures – on the expression of politics, cultures and social aspects that mark the territories of the urban and particularly those of reclaimed lands in deep relation with the important sector of tourism - and its needs of infrastructures - developed in urban local or regional contexts.

Macau, being an old historical city that had face in less than one decade strong changes in its profile and urban structure, is a good sample that illustrates the purpose of this paper. The main question is whether land reclamation can remain as an option for a rapid territorial expansion mainly used for tourism purposes in detriment of other urban infrastructures - locals and housing needs - not to mention environmental aspects, high costs and future viability.

Technology it is important in order to fast and efficiently help the city to grow, namely when constructing this new land. Until the end of the twenty century land reclamation done in Macau had to wait for 10 years to make the land stable before construction. From then compactation systems and the use of other fulfilling materials help to do it faster.

Since land reclamation it is in use worldwide for diverse reasons and urban contexts, that became an important issue to be discussed among urban planners and entities involved in urban shaping. The wide

variety of uses promoted by land reclamation led us to think about urban issues and to question why reclamation is so popular. We found some reasons for that and perhaps the most important reason, conceptually speaking, is because reclamation is a ground zero, a *tabula rasa* where everything is new, as a painter uses his canvas or a writer uses his blank sheet. The land reclamation is an opportunity to improve, correct mistakes, create and better decide future urban interventions.

Examples such as the big green park *Aterro do Flamengo* in Rio de Janeiro, Brazil; city states like Monaco and Singapore or the Dutch cities like Rotterdam or the “offshore” urbanism of Dubai, are the proof of the diversity of reclaimed land to water, used to meet the needs of expansion where tourism assumes a great role in promoting this new land areas.

It is important for us to understand some of the relational aspects of urban planning which are associated with the issues of the practice of science on material production, such as the development of dredging techniques, needs of time for consolidating fullfilling materials and the techniques used to build and construct infra and supra architectures and structures.

These abilities of building in flat land without geographical or socio-cultural references, development based purely on the economical profits, raise distinct aspects and ask for different approaches and solutions, not only design basis but also in using it in a different and contemporary urban contexts’ complexity that passes by doing urban planning.

The other way is to slowly, criterially and rigorously increase land, extend the city by a process of generating spaces identifiable by the existing city creating deep relations, in harmony or in contrast with the pre-existing.

We did not look for “the answer” since we are trying to open the discussions and debates about this huge topic. One thought led us to believe that the challenge of the theoretical discussion on land reclamation as a built and morphological entity for tourism provides way to (re)shaping and expansion of urban metropolitan areas and urbanistic responsibilities should take actions.

The intentions of this research links with the study of the urban entities interspersed by water and land reclamations, adding some interesting aspects to the debated and tested theoretical models - waterfronts, islands, water cities - where tourism plays a big role.

Demobilization of port activities driven by rapid improvement in the economic condition fostered by global scale policies refers to the discontinuity of major industries traditionally assigned to a land reclamation site creating an important spacial and imagetic void territory in these cities that contemporary try to solve.

On landfills, now empty of industry, new programs and plans are done, converting, rehabilitating and transforming fields generally in continuity with the cities to which they belong to.

The twentieth century was particularly inventive in the form of occupation of these territories \_ converted by hygienists measures on the previous century and the elimination of the “urban miasmas”, etc. – introducing on them regularization and linearization that opened the city and gave a new scale, both on the horizontal plan, or on the verticalization of the built on these reclaimed land | waterfronts.

The use of land reclamation as a new territory for urban use and building, appears discontinued from the understanding and implementation of previous centuries. Reclamation for agricultural or industrial implementation in the continuity of the city, appears now functionally planned in accordance to the premises of the *tabula rasa* from ground zero, the point of no reference, trying instead to generate them on a global scale.

Land reclamation contributed for the rapid territorial development and urbanization in Macau during the twentieth century, particularly visible from the 1990’s and after the handover to China in 1999, when

territory was dramatically verticalized.

The turn of the twentieth century to the twentieth-first century, provided by technical and economic capabilities and politics assumed by many states and cities, will be a decisive support for the “thematic city” (PRC), to create new city (Dubai), among many other places, in short for the full condition of diffused city with its own limits in utopia.

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